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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LY, ANH

ART UNIT

PAPER NUMBER

2162

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/893,789	Applicant(s) NOVAES, MARCOS NOGUEIRA	
	Examiner Anh Ly	Art Unit 2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) 18-21, 40-43 and 46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17, 22-39, 44, 45 and 47-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is response to Applicant's Response filed on 02/03/2006.
2. Claims 1-17, 22-39, 44-45 and 47-55 are pending in this Application.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

the claimed invention is directed to non-statutory subject matter.

The claims 1, 22, 23, 44, 45 and 47 are rejected under 35 U.S.C. 101.

Based on the "new guidelines", the claims 1, 23, 44 and 45 are directed to an abstract idea, non-practical application and having no tangible result. First of all, the database is not stored on a storage medium. The "N dimensional coordinate space" is a mathematical problem, in which N is derived from the number of subject words of data blocks (also see claim 4). And on claims 45 and 47, the medium is carry signal or carrier wave and signal-bearing media including transmission data such as analog and wireless, which are non-statutory subject matter. See *In re Warerdan*, 33 F.3d 1354, 1358 USPQ2d 1754, 1757 (Fed. Cir. 1994) and *State Street*, 149 F.3d at 1373-74, 47 USPQ2d, at 1601-02 (the claimed invention as a whole must accomplish a practical application, that is, it must produce a "useful, concrete and tangible result."

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 22, 23, 44, 45 and 47 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: how the step or process of indexing data blocks is. The body of the claim does not perform what set forth in the preamble of the claim. The body of the claim does not index data blocks according to a collection of subject words of the data blocks.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 6-8, 10, 23, 28-32, 45 and 48-51 are rejected under 35 U.S.C. 102(e) as being anticipated by Pub. No.: US 2003/0130998 A1 of Fox et al. (hereinafter Fox).

With respect to claim 1, Fox teaches a computer-implemented method of indexing data blocks according to a collection of subject words of the data blocks (an automated information retrieval and visualization systems for document database and

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displaying n-dimensional of keywords or subject words having indexed, each is a data block: abstract, paragraphs: 0009, 0012-0014 and 0016-0019 and fig. 2a and paragraph 0084), comprising:

constructing a N-dimensional coordinate space, wherein N is a cardinality of the collection of subject words of the data blocks (creating context vector representations for each keyword, topic or subject found in the searches: paragraphs 0054, 0018-0019, 0055, 0104; also see figs. 12 and 13, paragraphs 0054-0055).

With respect to claim 6, Fox teaches wherein all dimensions of said N-dimension coordinate space are considered (vector representations for keywords: paragraphs 0054-0057).

With respect to claim 7, Fox teaches wherein said data blocks comprise documents, said method further comprising building a term-by-document matrix and using all of the terms in N-dimensions in the coordinate space (paragraphs 0014, 0051 and 0054-0055).

With respect to claim 8, Fox teaches utilizing a column term in the term-by-document matrix as a vector (abstract, fig. 2a, paragraphs 0045, 0051 and 0054-0055).

With respect to claim 10, Fox teaches building a proximity list for each data block (paragraphs 0059 and 0065).

Claim 23 is essentially the same as claim 1 except that it is directed to a system rather than a method, and is rejected for the same reason as applied to the claim 1 hereinabove.

Claim 28 is essentially the same as claim 6 except that it is directed to a system rather than a method, and is rejected for the same reason as applied to the claim 6 hereinabove.

Claim 29 is essentially the same as claim 7 except that it is directed to a system rather than a method, and is rejected for the same reason as applied to the claim 7 hereinabove.

Claim 30 is essentially the same as claim 8 except that it is directed to a system rather than a method, and is rejected for the same reason as applied to the claim 8 hereinabove.

Claim 32 is essentially the same as claim 10 except that it is directed to a system rather than a method, and is rejected for the same reason as applied to the claim 10 hereinabove.

Claim 45 is essentially the same as claim 1 except that it is directed to a signal-bearing medium rather than a method, and is rejected for the same reason as applied to the claim 1 hereinabove.

With respect to claim 48, Fox teaches wherein each data block represents a document and each said document is represented as a vector which has a position in the N-dimensional coordinate space of N subject words, such that a relationship is independent of any other document (paragraphs 0054-0055).

With respect to claim 49, Fox teaches wherein each data block represents a document and wherein a document can be added to the coordinate space without

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impacting a measurement of any other document (paragraphs 0054-0055 and 0107-0109).

Claim 50 is essentially the same as claim 48 except that it is directed to a computer system rather than a computer-implemented method, and is rejected for the same reason as applied to the claim 48 hereinabove.

Claim 51 is essentially the same as claim 49 except that it is directed to a computer system rather than a computer-implemented method, and is rejected for the same reason as applied to the claim 49 hereinabove.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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7. Claims 2-5, 9, 24-27 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pub. No.: US 2003/0130998 A1 of Fox et al. (hereinafter Fox). in view of Pub. No.: US 2005/0192957 of Newbold.

With respect to claim 2, Fox a method of indexing data blocks according to a collection of subject words of the data blocks as discussed in claim 1.

Fox teaches building a N-dimensional vector space for N keyword to be retrieved from a document. Fox does not clearly teach traversing data block links leading to discovery of cross-subject affinities.

However, Newbold teaches creating the link and traversing of the link of the affinities (paragraph 0030).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Fox with the teachings of Newbold. One having ordinary skill in the art would have found it motivated to utilize the use of traversing links of affinities as disclosed (Newbold's paragraph 0030), into the system of Fox for the purpose of easing user to access and to make useful information available to others, thereby searching for relevant documents over the network more efficient (Newbold's paragraph 0023).

With respect to claim 3, Fox teach a method of indexing data blocks according to a collection of subject words of the data blocks as discussed in claim 1.

Fox teaches building a N-dimensional vector space for N keyword to be retrieved from a document. Fox does not clearly teach determining a closeness of any two data blocks in said database.

However, Newbold teaches closeness value among documents in a database (paragraphs 0034 and 0038).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Fox with the teachings of Newbold. One having ordinary skill in the art would have found it motivated to utilize the use of closeness of documents in a database as disclosed (Newbold's paragraph 0034 and 0038), into the system of Fox for the purpose of easing user to access and to make useful information available to others, thereby searching for relevant documents over the network more efficient (Newbold's paragraph 0023).

With respect to claim 4, Fox teaches wherein said determining is performed according to an equation comprising where D is a data block and p_1, p_2 are points in the N -dimensional space and S is a summation (paragraphs: 0051-0055 and 0057-0068).

With respect to claims 5 and 9, Fox teach a method of indexing data blocks according to a collection of subject words of the data blocks as discussed in claim 1.

Fox teaches building a N -dimensional vector space for N keyword to be retrieved from a document. Fox does not clearly teach wherein affine documents are determined to be in closer proximity than non-affine documents in a mapping to N -space coordinates.

However, Newbold teaches metadata relationship of document (paragraph 0090).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Fox with the teachings of

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Newbold. One having ordinary skill in the art would have found it motivated to utilize the use of affinenss and closeness of documents in a database as disclosed (Newbold's paragraph 0090), into the system of Fox for the purpose of easing user to access and to make useful information available to others, thereby searching for relevant documents over the network more efficient (Newbold's paragraph 0023).

Claim 24 is essentially the same as claim 2 except that it is directed to a system rather than a method, and is rejected for the same reason as applied to the claim 2 hereinabove.

Claim 25 is essentially the same as claim 3 except that it is directed to a system rather than a method, and is rejected for the same reason as applied to the claim 3 hereinabove.

Claim 26 is essentially the same as claim 4 except that it is directed to a system rather than a method, and is rejected for the same reason as applied to the claim 4 hereinabove.

Claim 27 is essentially the same as claim 5 except that it is directed to a system rather than a method, and is rejected for the same reason as applied to the claim 5 hereinabove.

Claim 31 is essentially the same as claim 9 except that it is directed to a system rather than a method, and is rejected for the same reason as applied to the claim 9 hereinabove.

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8. Claims 11-17, 22, 33-39, 44, 47 and 52-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pub. No.: US 2003/0130998 A1 of Fox et al. (hereinafter Fox). in view of Patent No.: US 6,233,571 B1 issued to Egger et al. (hereinafter Egger).

With respect to claims 11-17, Fox teach a method of indexing data blocks according to a collection of subject words of the data blocks as discussed in claim 1.

Fox teaches building a N-dimensional vector space for N keyword to be retrieved from a document. Fox does not clearly teach traversing a hypertext link, web page, proximity list, a position of visited data block, and an item in the proximity list and hypertext links.

However, Egger teaches hyperlinks (col. 48, lines 46-62); web page, image database (col. 12, lines 40-45); proximity list (proximity indexing method to get order of the list: col. 13, lines 40-50) and a position of a visited data block (col. 13, lines 40-67; col. 15, lines 50-67 and col. 16, lines 12-35 and col. 48, lines 46-62).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Fox with the teachings of Egger. One having ordinary skill in the art would have found it motivated to utilize the use of traversing the hypertext links such as hyperlinks document on the web page as disclosed (Egger's col. 48, lines 46-62), into the system of Fox for the purpose of easing user to access and to make useful information available to others, thereby searching for relevant documents over the network more efficient.

With respect to claim 22, Fox teaches a method for indexing database (paragraphs: 0201 and 0212), comprising:

constructing a coordinate system (extracting or retrieving N keywords from a document in order to build or generate a N-dimensional vector space: paragraphs 0018, and 0030-0033).

Fox teaches building a N-dimensional vector space for N keyword to be retrieved from a document. Fox does not clearly teach mapping documents of said database into the coordinate system to determine a physical closeness of first and second documents of said database.

However, Egger teaches the page or document or web page are determined by user (col. 6, lines 6-25, and mapping the coordinates into a space: col. 28, lines 2-5 and col. 6, lines 6-50).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Fox with the teachings of Egger. One having ordinary skill in the art would have found it motivated to utilize the use of mapping document into the coordinate system as disclosed (Egger's col. 6, lines 6-50), into the system of Fox for the purpose of easing user to access and to make useful information available to others, thereby searching for relevant documents over the network more efficient.

Claim 33 is essentially the same as claim 11 except that it is directed to a system rather than a method, and is rejected for the same reason as applied to the claim 11 hereinabove.

Claim 34 is essentially the same as claim 12 except that it is directed to a system rather than a method, and is rejected for the same reason as applied to the claim 12 hereinabove.

Claim 35 is essentially the same as claim 13 except that it is directed to a system rather than a method, and is rejected for the same reason as applied to the claim 13 hereinabove.

Claim 36 is essentially the same as claim 14 except that it is directed to a system rather than a method, and is rejected for the same reason as applied to the claim 14 hereinabove.

Claim 37 is essentially the same as claim 15 except that it is directed to a system rather than a method, and is rejected for the same reason as applied to the claim 15 hereinabove.

Claim 38 is essentially the same as claim 16 except that it is directed to a system rather than a method, and is rejected for the same reason as applied to the claim 16 hereinabove.

Claim 39 is essentially the same as claim 17 except that it is directed to a system rather than a method, and is rejected for the same reason as applied to the claim 17 hereinabove.

With respect to claim 44, Fox teaches constructing a coordinate system and a collection of subject words, such that said coordinate system comprises an N-dimensional coordinate space, wherein N is a cardinality of the collection of subject

words (extracting or retrieving N keywords from a document in order to build or generate a N-dimensional vector space: paragraphs 0018, and 0030-0033).

Fox teaches building a N-dimensional vector space for N keyword to be retrieved from a document. Fox does not clearly teach a mapping unit for mapping documents of said database into the coordinate system to determine a physical closeness of first and second documents of said database.

However, Egger teaches the page or document or web page are determined by user (col. 28, lines 2-5 and col. 6, lines 6-50, wherein indexing said database is performed according to: col. 18, lines 32-40 and col. 16, lines 4-12; also see abstract, the indexing documents are created as a representation of data system by using generation algorithm, fig. 3H and col. 21, lines 30-67 and col. 22, lines 32-58).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Fox with the teachings of Egger. One having ordinary skill in the art would have found it motivated to utilize the use of mapping document into the coordinate system as disclosed (Egger's col. 6, lines 6-50), into the system of Fox for the purpose of easing user to access and to make useful information available to others, thereby searching for relevant documents over the network more efficient.

Claim 47 is essentially the same as claim 44 except that it is directed to a signal-bearing medium rather than a method, and is rejected for the same reason as applied to the claim 44 hereinabove.

Claim 52 is essentially the same as claim 48 except that it is directed to a computer system rather than a computer-implemented method, and is rejected for the same reason as applied to the claim 48 hereinabove.

Claim 53 is essentially the same as claim 49 except that it is directed to a computer system rather than a computer-implemented method, and is rejected for the same reason as applied to the claim 49 hereinabove.

Claim 54 is essentially the same as claim 48 except that it is directed to a computer system rather than a computer-implemented method, and is rejected for the same reason as applied to the claim 48 hereinabove.


Claim 55 is essentially the same as claim 49 except that it is directed to a computer system rather than a computer-implemented method, and is rejected for the same reason as applied to the claim 49 hereinabove.

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Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh Ly whose telephone number is (571) 272-4039 or via E-Mail: ANH.LY@USPTO.GOV or fax to **(571) 273-4039**. The examiner can normally be reached on TUESDAY – THURSDAY from 8:30 AM – 3:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene, can be reached on (571) 272-4107 or **Primary Examiner Jean Corrielus (571) 272-4032**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). Any response to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, or faxed to: **Central Fax Center: (571) 273-8300**

ANH LY 
APR. 4th, 2006


JEAN M. CORRIELUS
PRIMARY EXAMINER